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(57) Abstract: The invention provides  $\pi$ -conjugated oligomers and polymers. The oligomers and polymers may comprise at least two n-conjugated amino acid subunits. The oligomers and polymers may contain one or more n-conjugated amino acid subunits that are optically, electrically or electronically active. The invention also provides optical, electronic and electric devices comprising oligomers and/or polymers having one or more \(\pi\)-conjugated amino acids that are optically, electrically, or electronically active.